

C. B.  
FTF Gun  
8/13

### PRODUCT A DESCRIPTION

#### Uses:

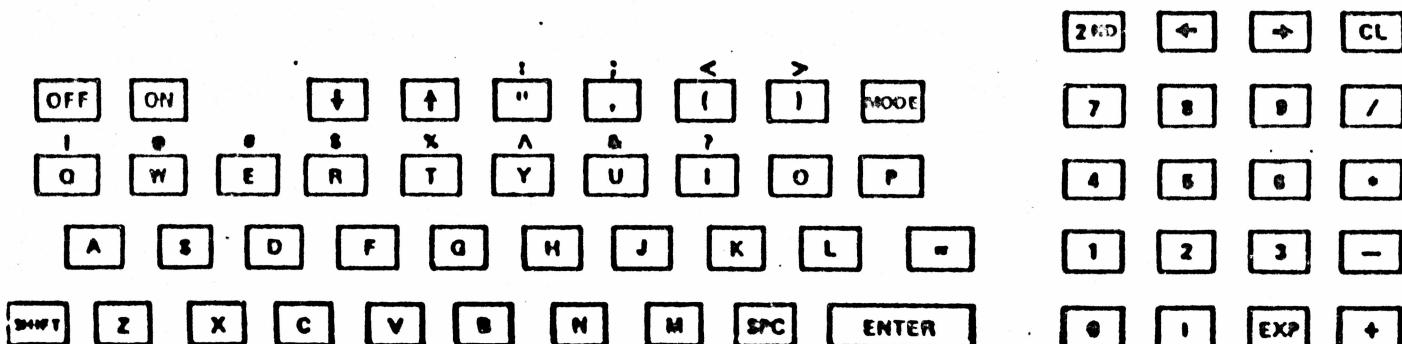
BASIC language computer for students, programmable calculator users, business and professional users and computer language learning.

#### SPECIFICATIONS:

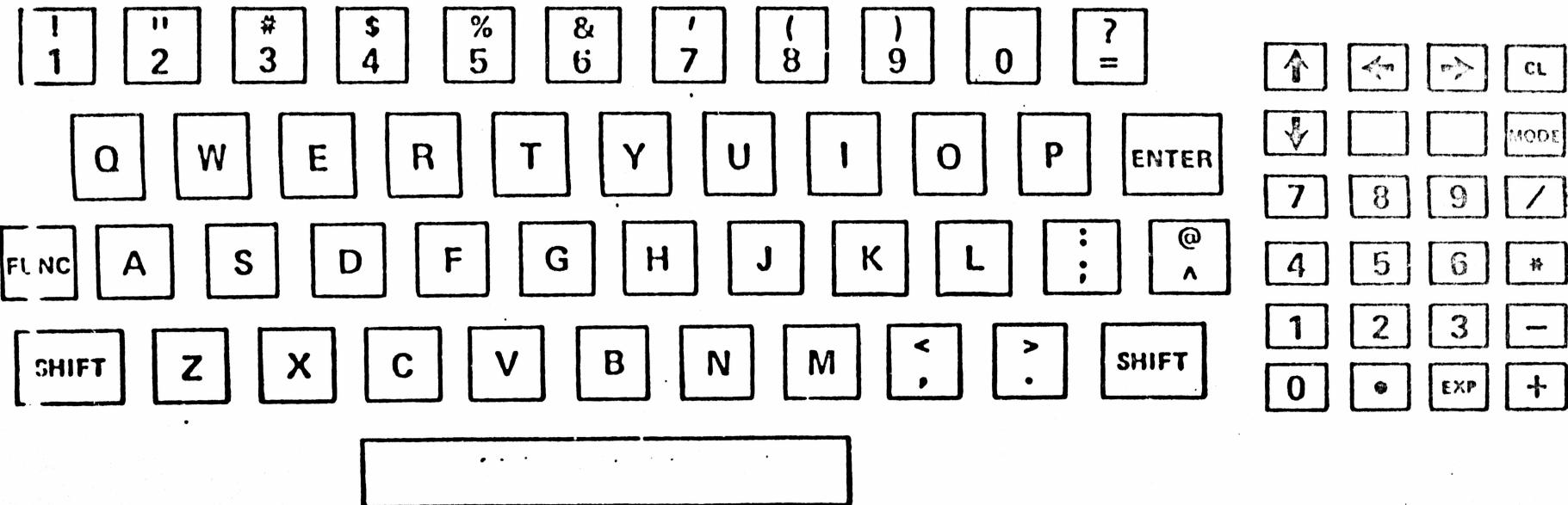
Size: 8.0 x 3.5 x 1.0 (or wedge shaped .65 to 1.0)  
Display: One line 5x5 dot matrix, 32 characters 1/10 duty cycle  
Keyboard: QWERTY on .5" H x .4" V centers with separate numeric pad  
Elastomer travel keyboard with overcenter "feel"  
Language: BASIC built in  
Speed: Equivalent to Sharp 1211 (similar to TI-59)  
Memory: 1) 1K byte internal RAM with plug-in RAM expansion to  
8K bytes (150 lines of BASIC to 1200 lines of BASIC)  
(1000 steps to 8000 steps or 125 memories to 1000  
memories)  
2) External plug-in ROM will be available and will  
provide capability for customized applications  
3) Non volatile CMOS RAM modules can be used in the  
RQ4 slot to provide permanent storage of program  
or data  
I/O: An output port similar mechanically to that on Sharp 1211  
will provide peripheral connection for RS-232 adapter,  
printer, modem, TV display adapter, and mass storage device  
Power: throwaway battery. 250 hour battery life minimum  
Price: \$150  
\$170

# Project 'A'

TOTAL MATERIAL COST = 212.53



PAYMENT NO. 12 = \$ 384.38  
INTEREST = \$ 221.15

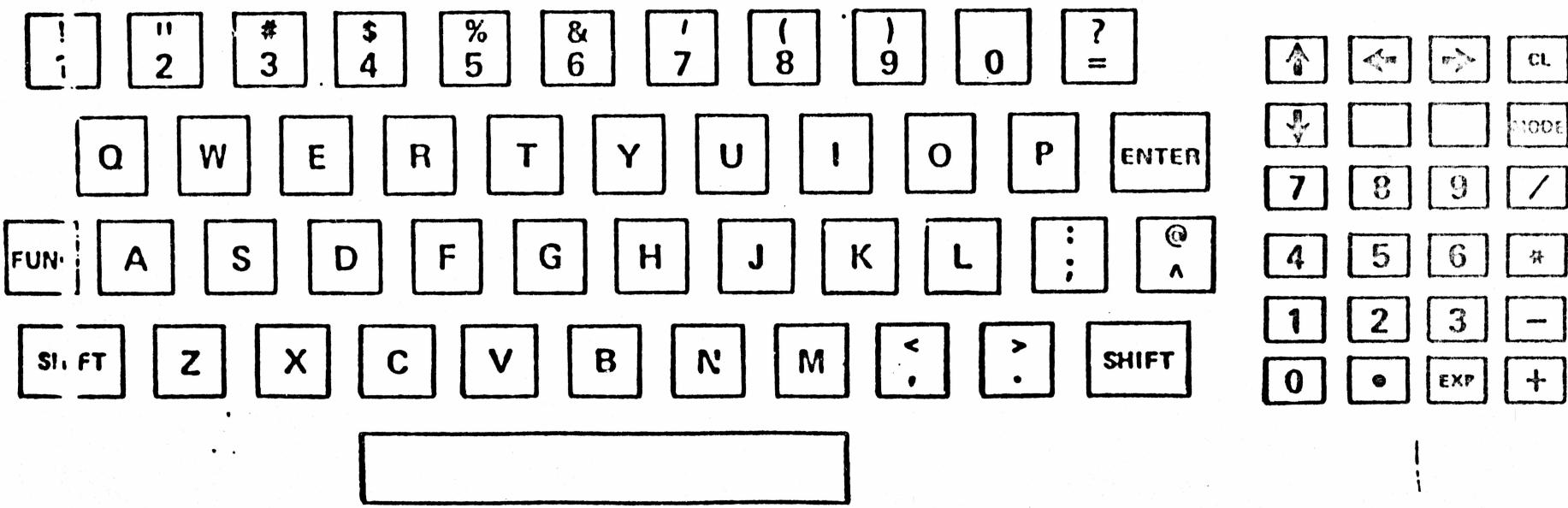


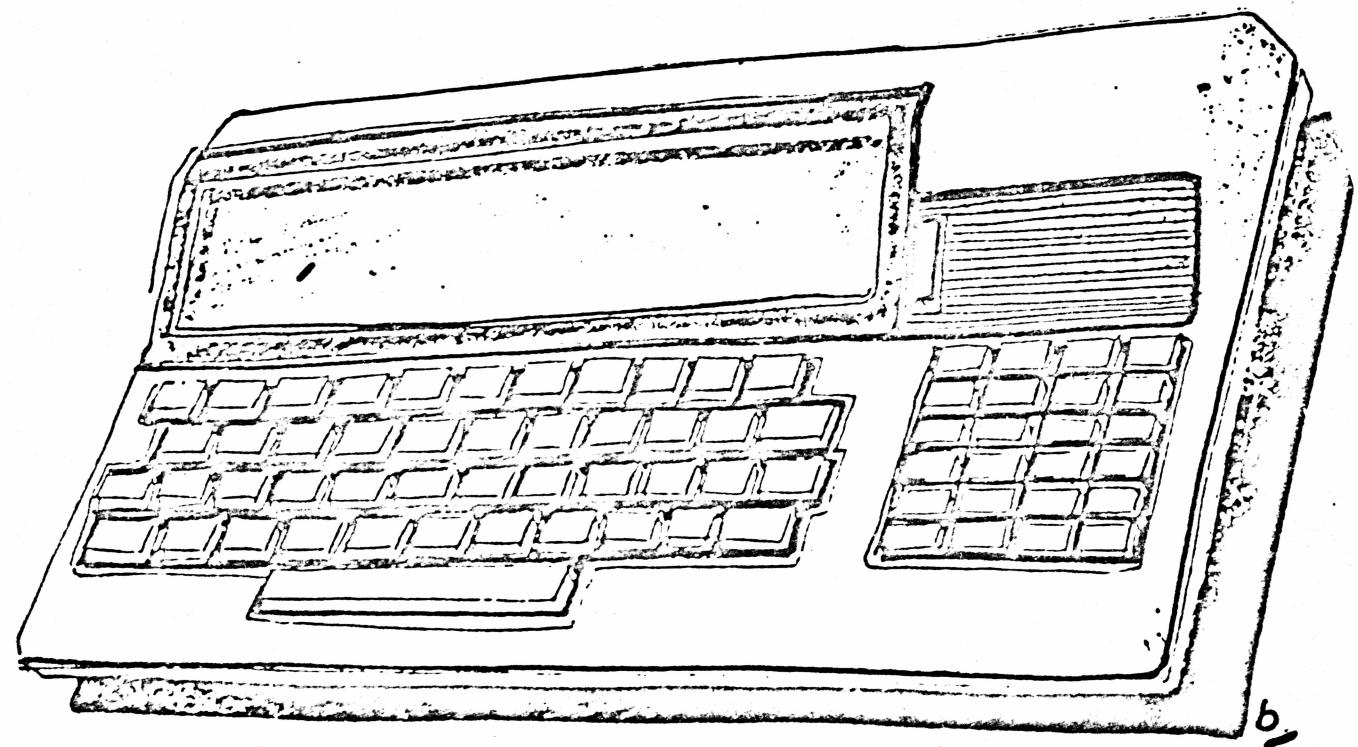
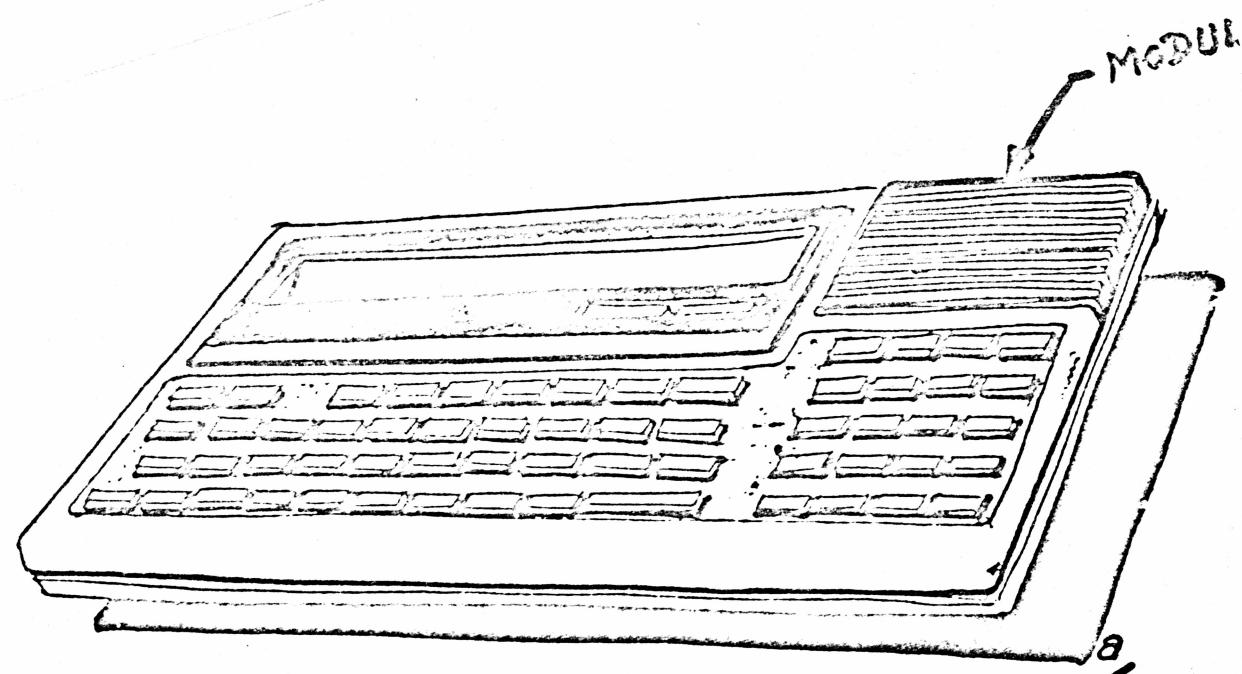
Product Concept 2

PRODUCT 'B'

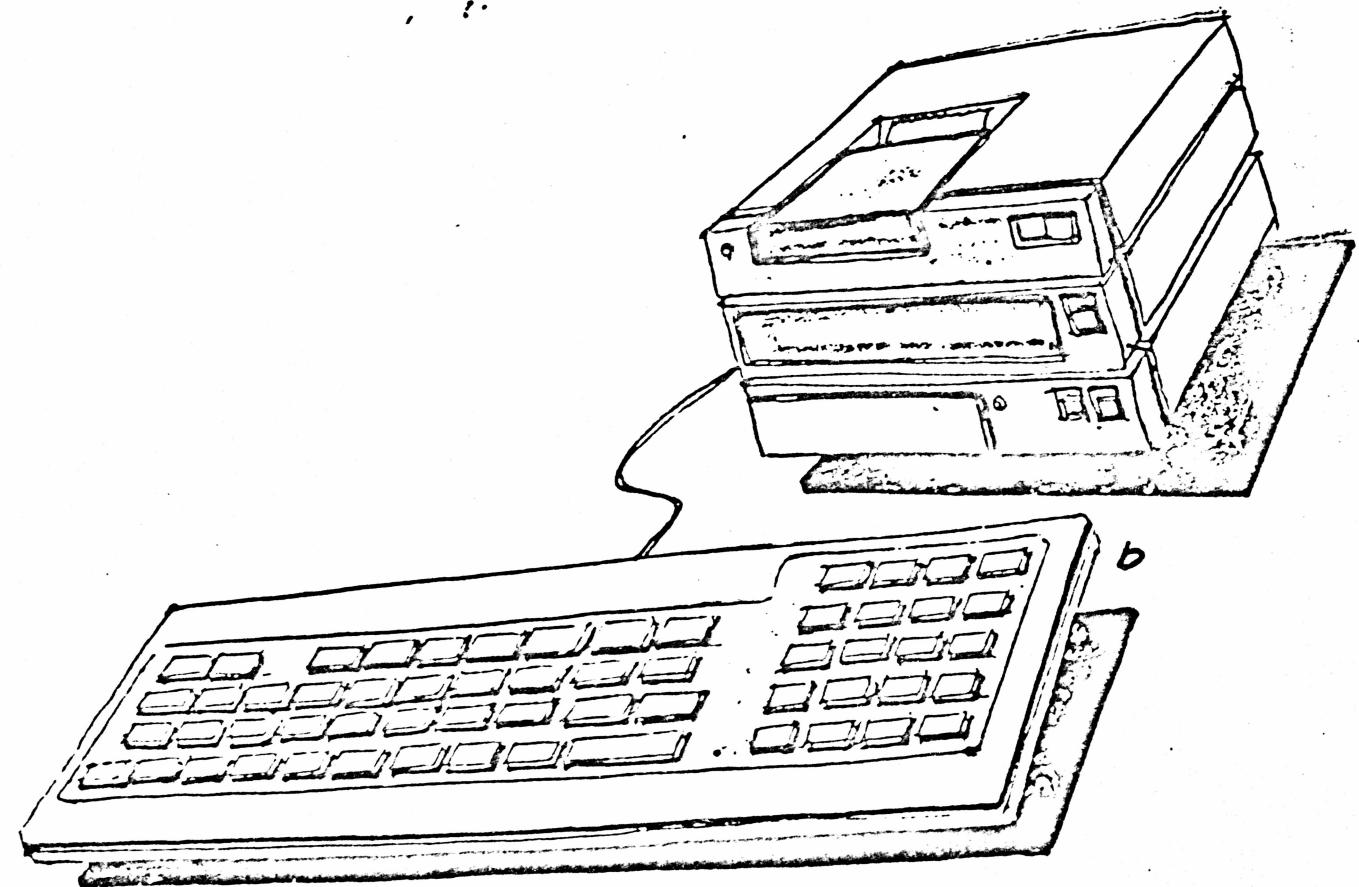
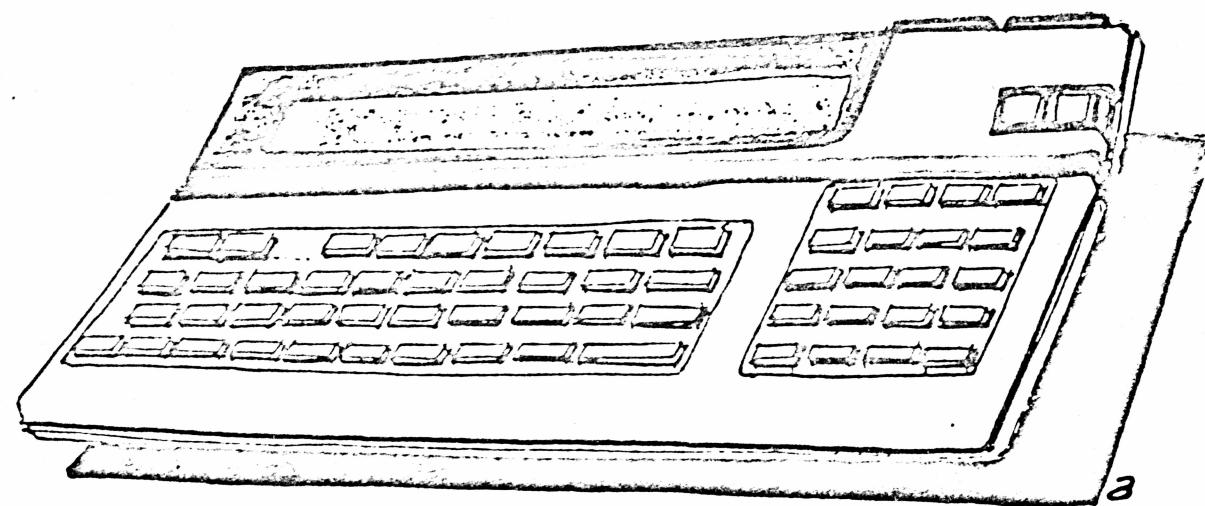
Product Concept C . Product 'C'

MONTH	JAN	FEB	MAR	1Q	2Q	YEAR
SALES	93.6	100.2	107.2	301	369	1485
INATL	51.1	49.3	53.2	154	180	730
OTHER	46.2	44.1	40.4	131	130	480
PROFIT	-3.7	6.8	13.6	17	59	275
PROF	-4.0	6.8	12.7	5.5	16.0	18.5





Handskizze 12/20



HC

Bill Moulton 3/21/81

CONSUMER MECHANIZATION DEPARTMENT  
PRELIMINARY DESIGN REVIEW  
ADVANCED LANGUAGE CALCULATOR

DEFINED DESIGN FEATURES

PREL. SIZE: 9.20 X 5.70 X .85 RECTANGULAR FLAT

DISPLAY: ONE LINE 5 X 8 DOT MATRIX, 32 CHARACTERS 1/16 DUTY CYCLE

KEYBOARD: 

- ① TYPEWRITER SETTING WITH SEPARATE NUMERIC PAD, ELASTOMER KEYBOARD WITH "OVERCENTER FEEL"
- ② .550" H X .500" V CENTERS
- ③ SPACE BAR AND LARGER SHIFT KEY
- ④ ELASTOMER OR MOLDED WITH PRINTED GRAPHICS ON KEY TOPPERS (70 QTY.)

LANGUAGE: 'BASIC' BUILT-IN

08/12/81 GGB 039-437  
CS-6D-19

CONSUMER MECHANIZATION DEPARTMENT  
PRELIMINARY DESIGN REVIEW  
ADVANCED LANGUAGE CALCULATOR

DEFINED DESIGN FEATURES

- MEMORY:    0    2K BYTE INTERNAL RAM WITH PLUG IN RAM EXPANSION TO 16K BYTES.  
              TWO RAM CHIPS WITH LOW PROFILE SOCKET. (28 X .600 PACKAGE)
- 0    DROP IN MODULE FROM TOP WITH SNAP ON DOOR (ROM - CUSTOMIZED APPLICATIONS)
- 0    CHOS RAM MODULE CAN BE USED IN THE ROM SLOT TO PROVIDE PERMANENT STORAGE OF PROGRAM OR DATA.

I/O PORT:    8-PIN SINGLE ROW FOR PERIPHERAL CONNECTION

POWER:      2, 9V THROWAWAY BATTERIES OR 4, 'AA' RECHARGEABLE BATTERIES  
              WITH JACK

08/12/81    GGB    039-437  
CS-6D-19

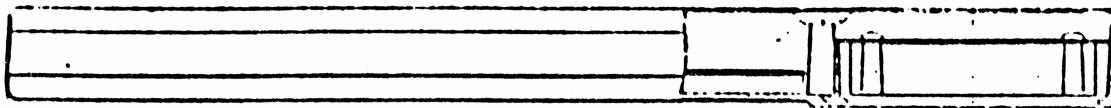
CONSUMER MECHANIZATION DEPARTMENT  
PRELIMINARY DESIGN REVIEW  
ADVANCED LANGUAGE CALCULATOR

DEFINED DESIGN FEATURES

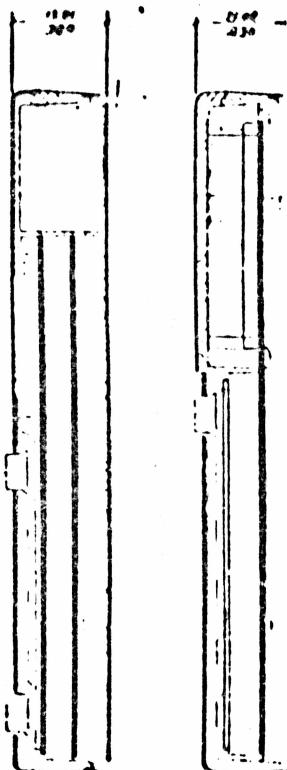
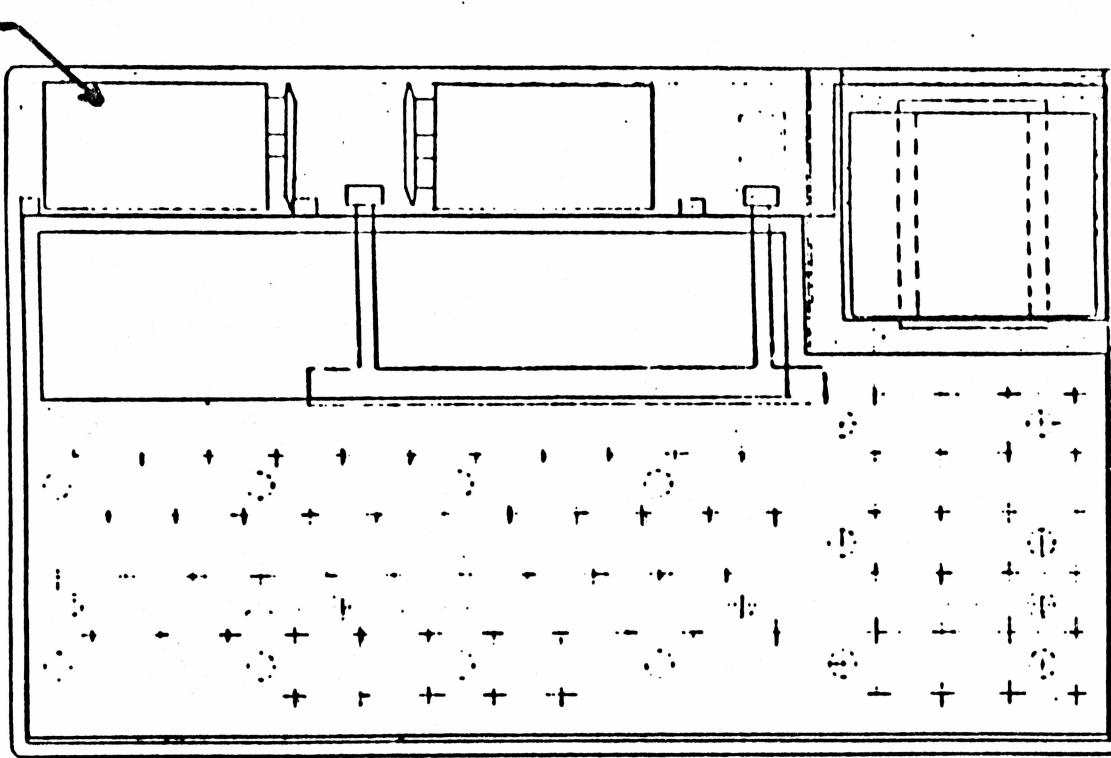
- PACKAGE:    ① .024" THICK (MAY BE) METAL BOTTOM CASE
- ① PLASTIC MOLDED TOP CASE WITH METAL OVERLAY FOR SUPPORT AND DECORATIONS.
- ① HIGHLY DENSE TWO PCB'S.
- ① SONICWELDED MODULE WITH ZEBRA STRIP AS INTERCONNECTION SYSTEM
- ① TILTING MECHANISM - 10° FROM HORIZONTAL IS UNDER INVESTIGATION, STILL OPTIONAL AT THIS STAGE.
- ① PLASTIC MOLDED 'CRADLE', OPTIONAL TO CUSTOMER TO ALLOW ONE PERIPHERAL CONNECTED TO CONSOLE. IT SHOULD BE PORTABLE TO CARRY IN BRIEFCASE.
- ① PRICE: \$200 (DTC)
- ① QUAL BUILD: NOVEMBER '82

08/12/81    GGB    039-437

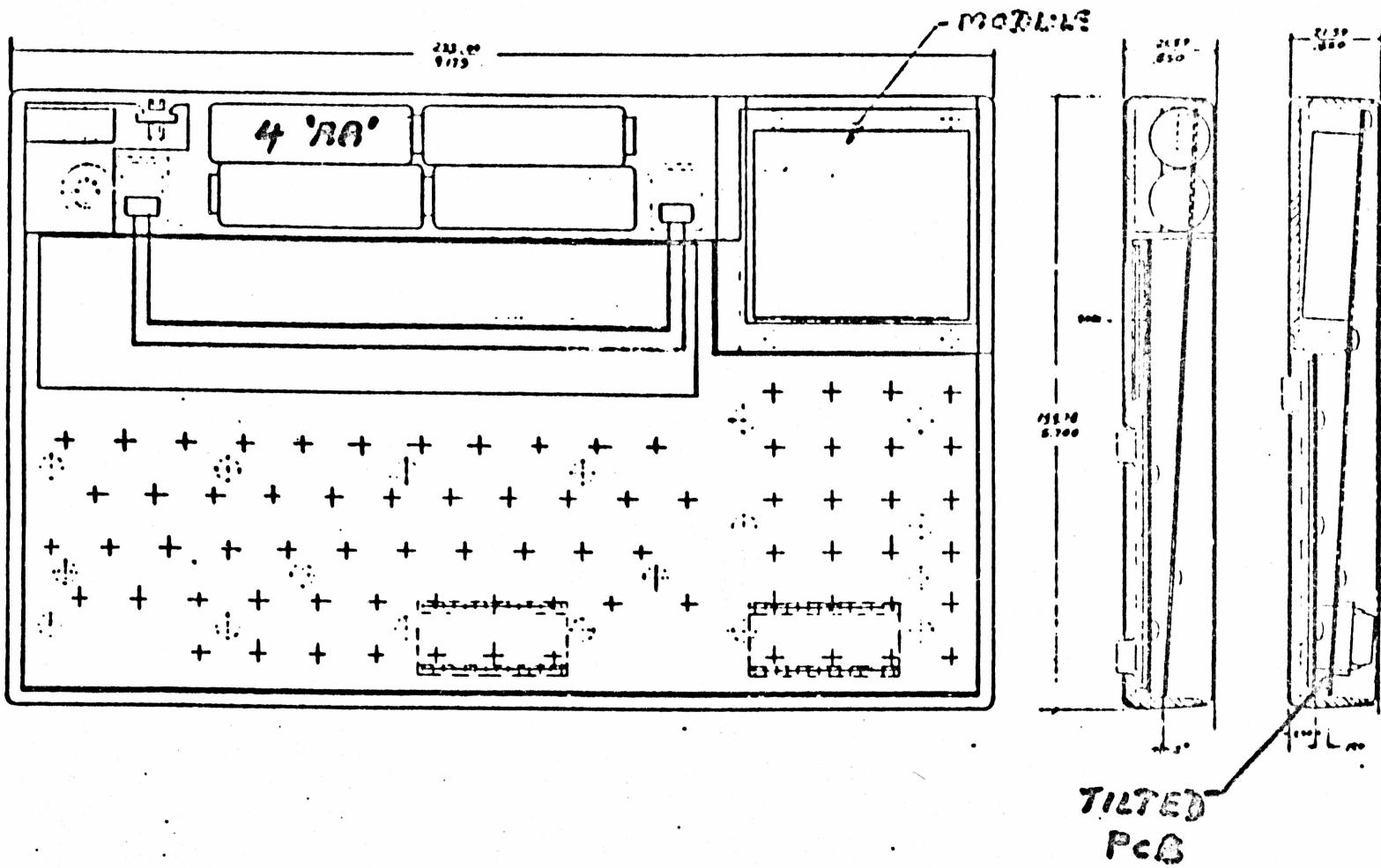
CS-6D-19

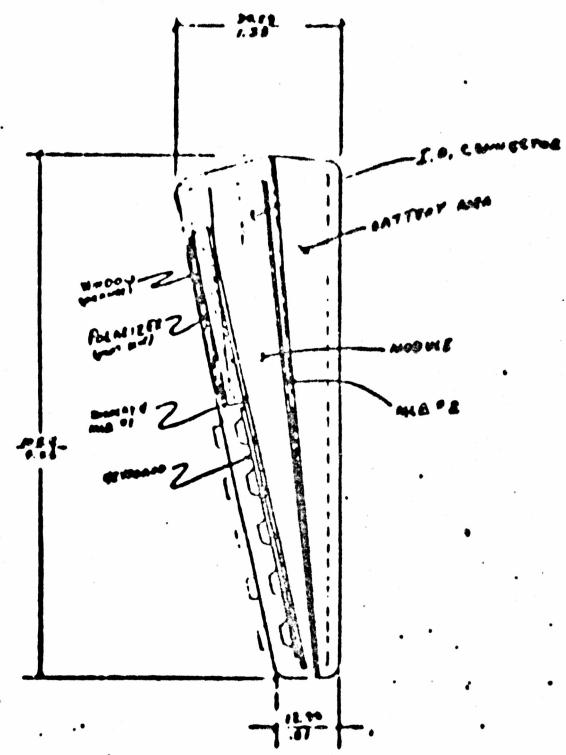
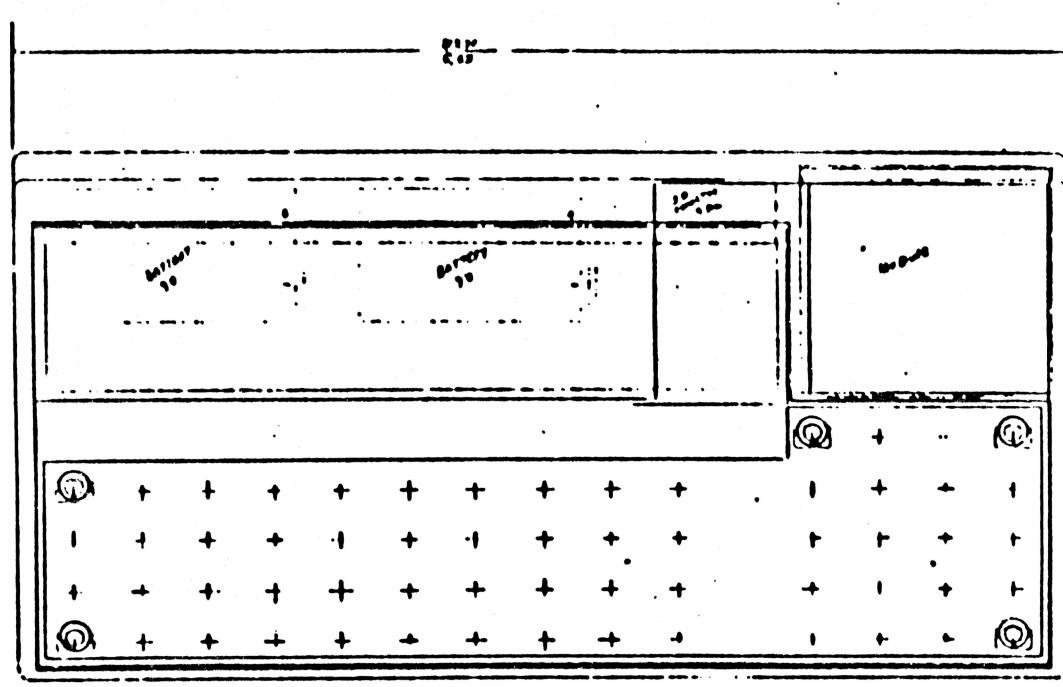


2,9V

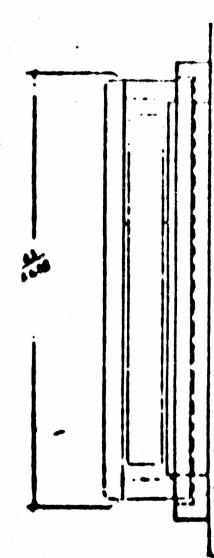
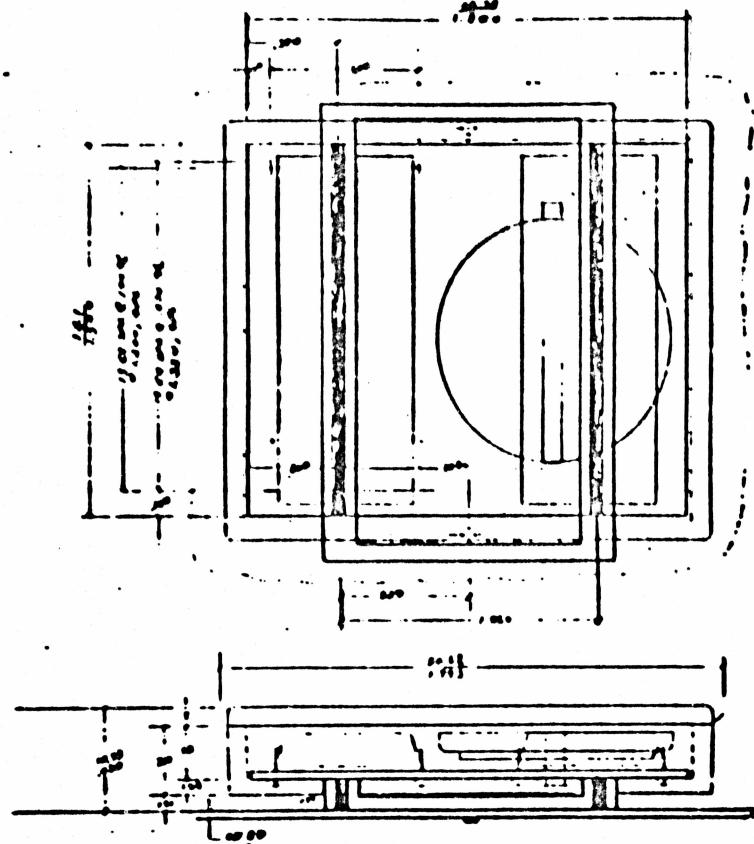


52





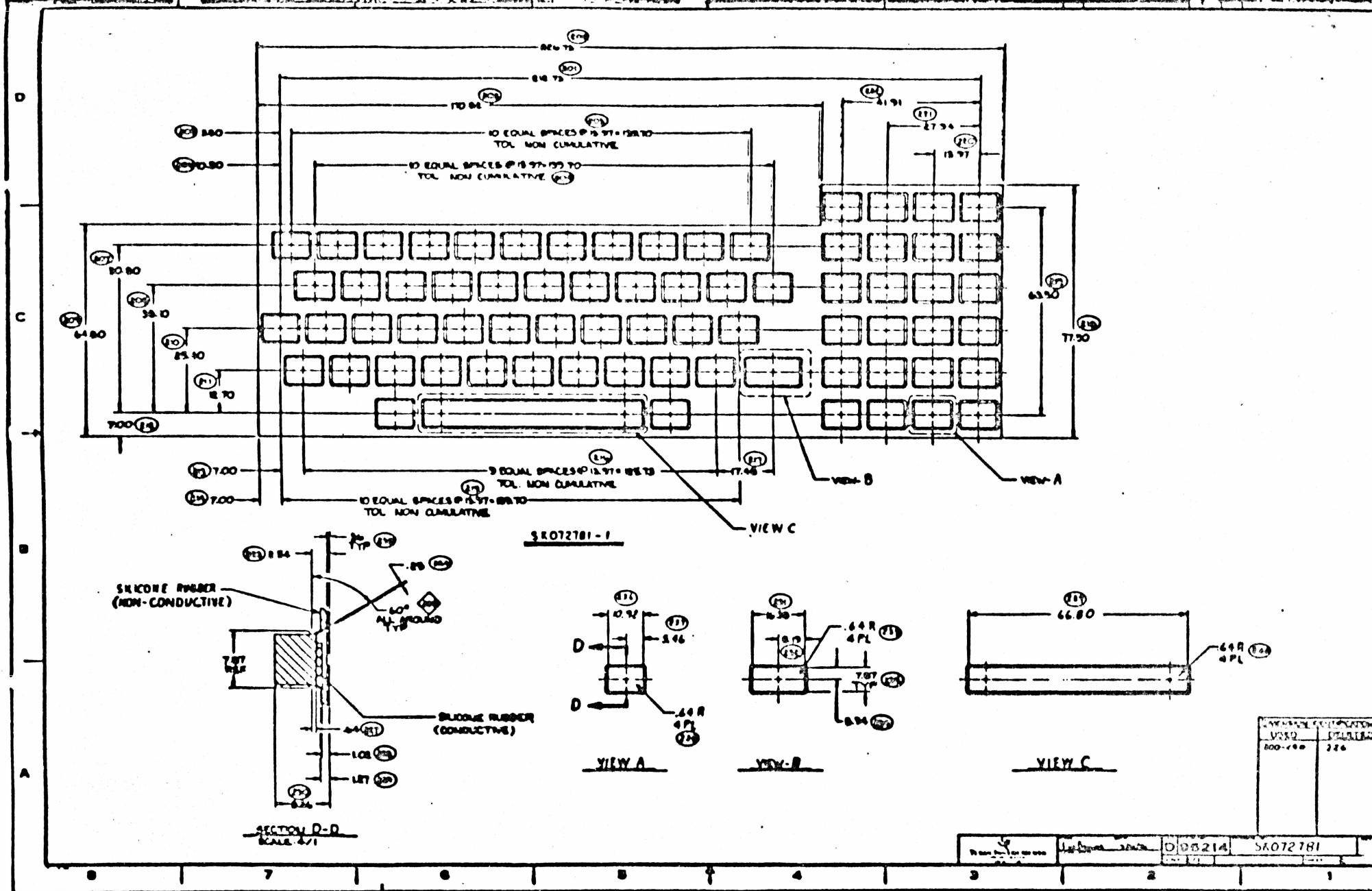
WEDGE

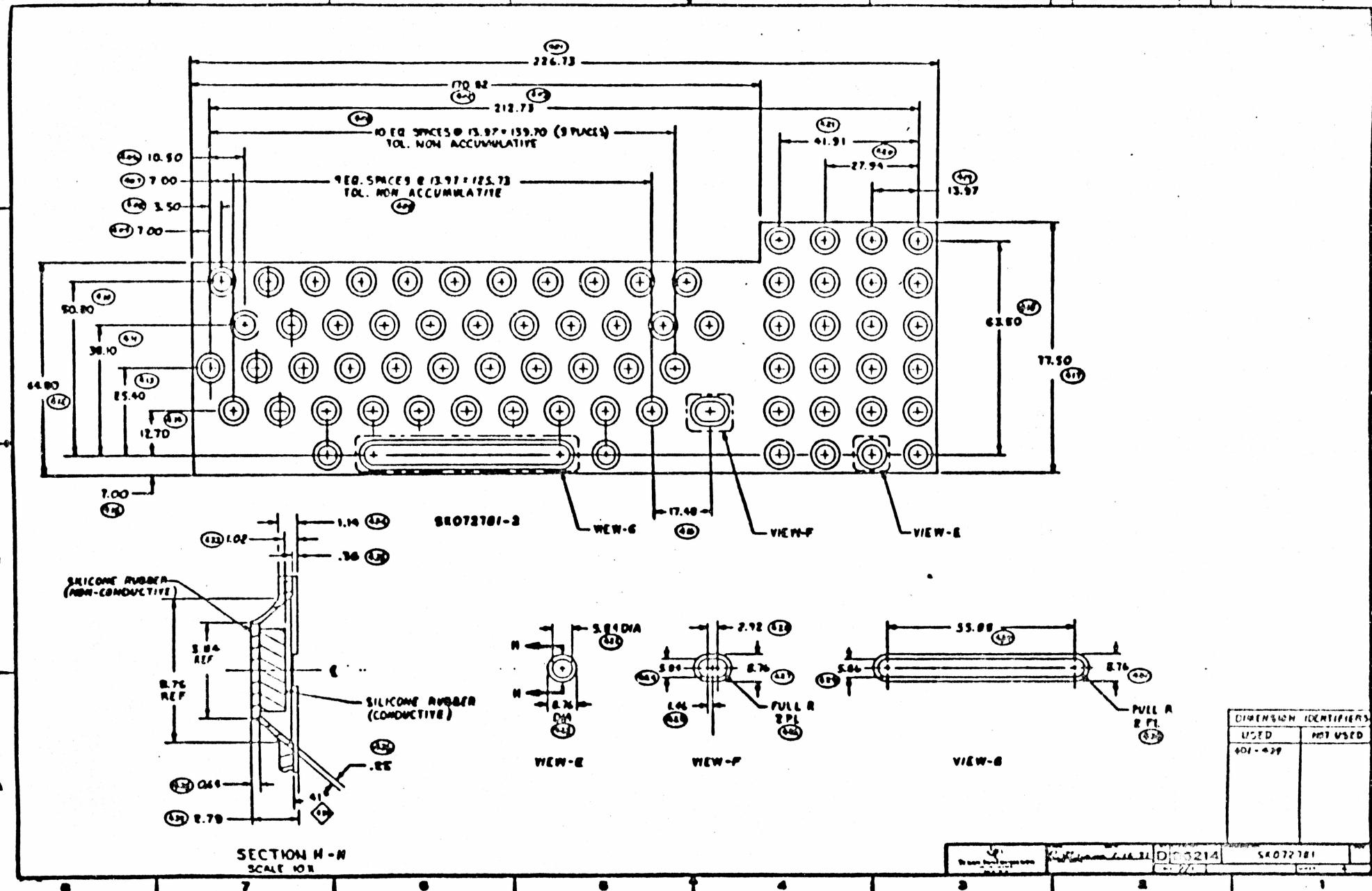


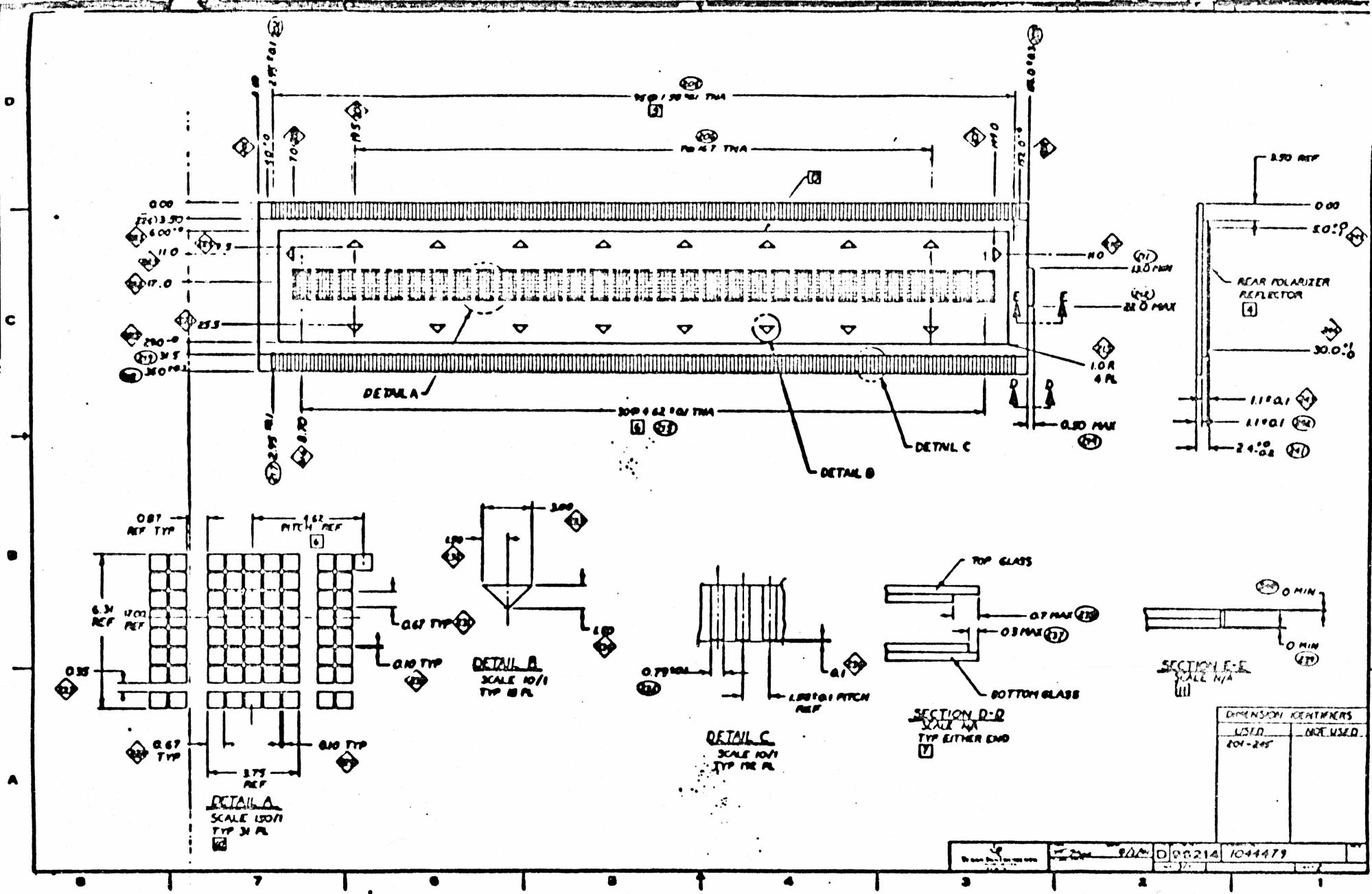
NOS 400 00-600 000

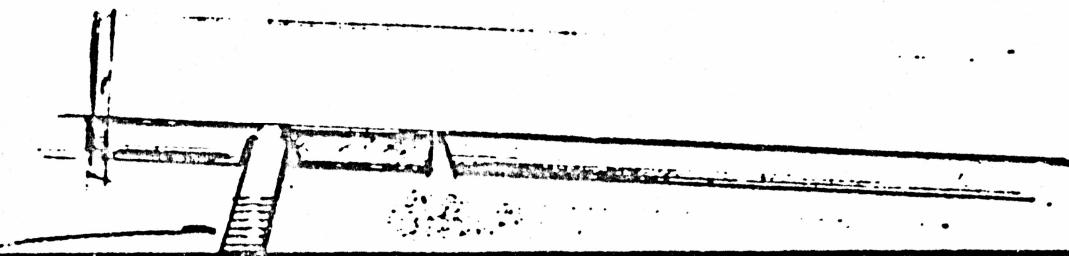
MODULE LAYOUT  
CONCEPT # 3  
DATE 6-14-81  
BY CHARLES GAYDA  
FOR GUY LARREA

MODULE





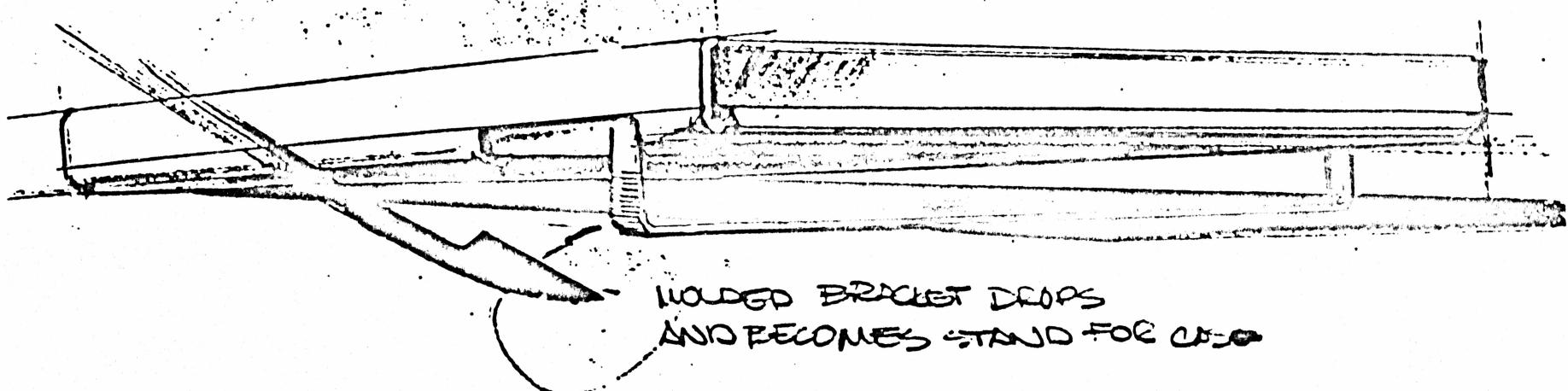




LENGTH OF BRACKET ENOUGH TO  
RAKE UNIT 6-10°

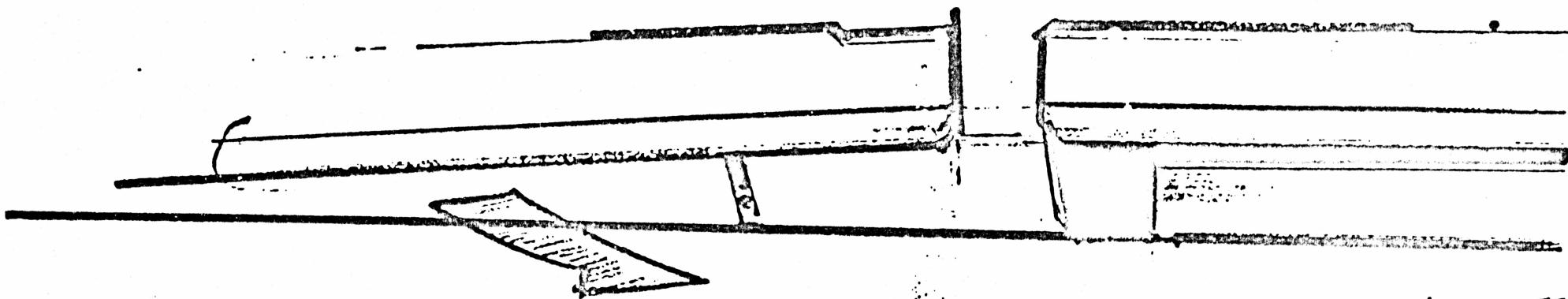


BRACKET SITS FLUSH TO CASE  
WHEN NOT USED OR FOR  
STORAGE



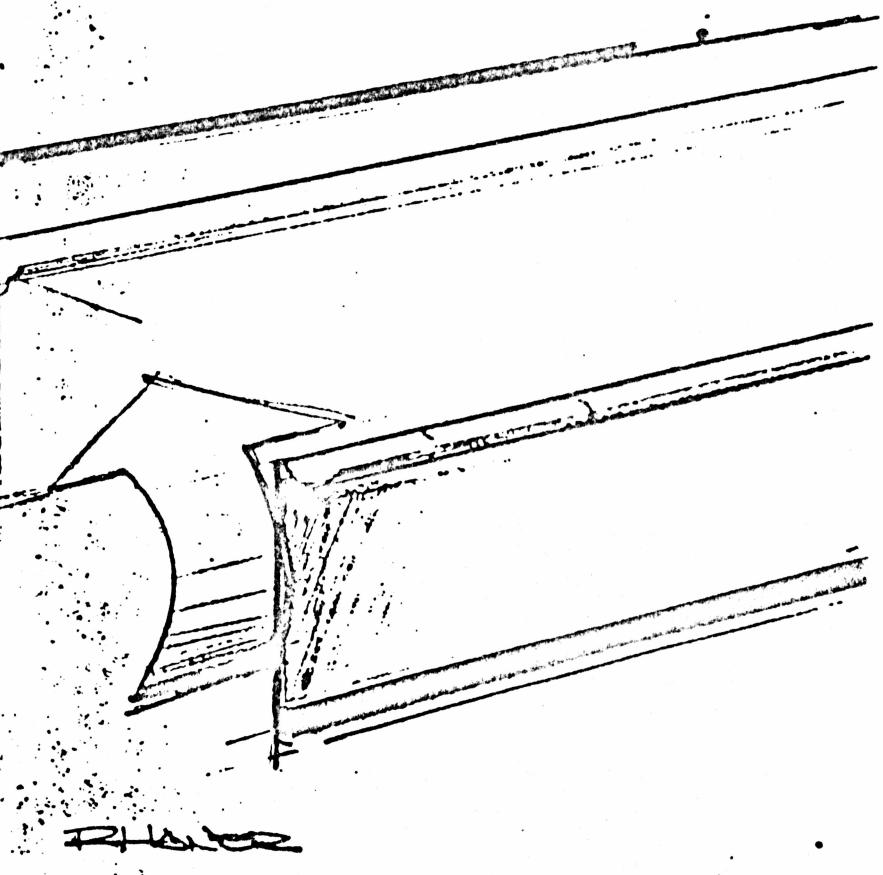
FISHER ET

~~SIDE VIEW~~



SMALL FLAP FOLDS DOWN  
AND LOCKS INTO PLACE

~~BACK VIEW~~



CONSUMER MECHANIZATION DEPARTMENT  
PRELIMINARY DESIGN REVIEW  
ADVANCED LANGUAGE CALCULATOR

PERIPHERAL SYSTEM

DEFINED PRODUCTS:

- ① RS-232
- ① MODEM
- ① DISK DRIVE
- ① PRINTER-32 COLUMNS (MAY BE PURCHASE ITEM)
- ① TV-INTERFACE

08/12/81    G6B    039-437  
CS-6D-19

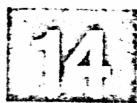
CONSUMER MECHANIZATION DEPARTMENT  
PRELIMINARY DESIGN REVIEW  
ADVANCED LANGUAGE CALCULATOR

PERIPHERAL SYSTEM

DESIGN APPROACH

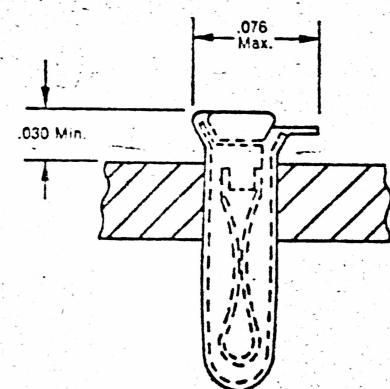
- Ø MINIMUM SIZE IN ORDER TO STYLED CLOSE TO CONSOLE. (4.7 X 5.75 X 1.2,  
4.7 X 5.75 X 1.7)
- Ø COMMON PLASTIC PARTS (POSSIBLY 4 TO 5 COMMON PLASTIC PARTS E.G. TOP  
CASE, BOTTOM CASE, BACK PLATE, ETC.)
- Ø LED AND CONTROL SYSTEM ON FRONT SIDE.
- Ø PERIPHERAL INTERCONNECTION SYSTEM SHOULD BE SIMPLE ENOUGH TO MAKE  
PORTABLE SYSTEM
- Ø 'CRADLE' ATTACHMENT FOR ONE PERIPHERAL ONLY (RS-232 OR MODEM)
- Ø POWER SUPPLY - UNDER INVESTIGATION
- Ø QUAL BUILD - NOVEMBER '82

08/12/81 GGB 039-437  
CS-6D-19



## Specifications

### Sealed Component Socket



### Application Tooling

#### Material:

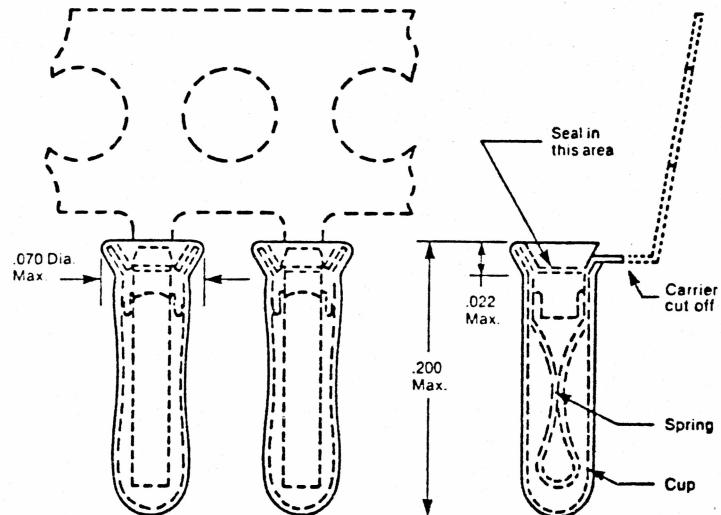
Cup — Copper (QQ-C-576), tin plate (MIL-T-10727) .000100 min. thickness

.000030 min. thickness over nickel plate (QQ-N-290)

Spring — Beryllium copper (QQ-C-533), gold plate (MIL-G-45204) .000030 min.

.000030 min. thickness

Seal — Silicone rubber



Part Number (22,500 per reel): 116389-7

Recommended hole size:  $.053 \pm .008$

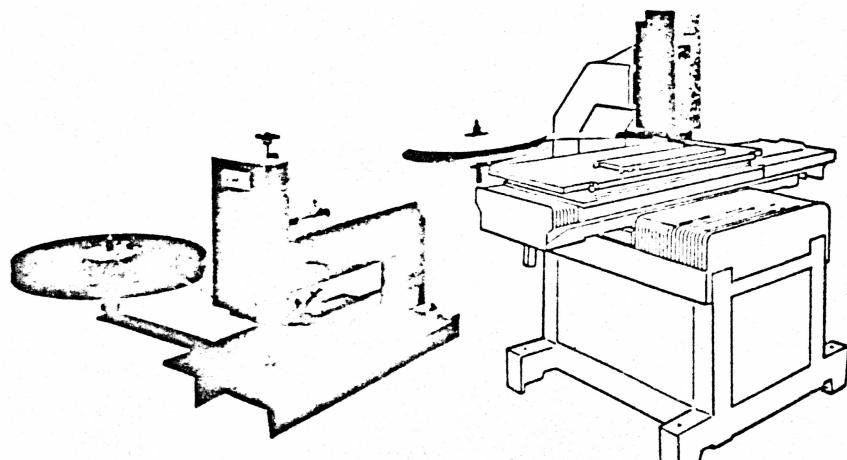
Component Socket insertion tooling consists of any applicator module that may be attached to an AMP bench mounted semi-automatic machine or with an interface to most any N/C machine in use today.

The bench mounted semi-automatic machine is capable of loading sockets into panels with pre-drilled holes of virtually any pattern configuration, spaced as close as .100" between centers at a net rate of 3000 an hour.

When using the applicator and

interface module coupled with a N/C machine, up to 7000 sockets per hour can be insured in virtually any pattern configuration.

Many design features are built into this tooling to offer ease of operation, eliminate extensive operator training and possible human error, plus assure long trouble-free service. These AMP features combine to enhance the economy of production by providing the assurance for highest product quality at the lowest installed cost.



Bench Machine  
Applicator Module 265895-1  
Base 265208-2

N/C Machine  
with Applicator Module  
and Interface

**CONSUMER MECHANIZATION DEPARTMENT  
ADVANCED LANGUAGE CALCULATOR  
SOCKET VS. INDIVIDUAL CONTACT**

<u>QTY</u>	<u>INDIVIDUAL CONTACT</u>	<u>TOTAL COST</u>	<u>SOCKET</u>	<u>TOTAL COST</u>
100K	.025 (INSTALLED)	\$1.4	.030	.060
	.020 (LOOSE)	' \$1.12 + LABOR		+ LABOR
250K	.022 (INSTALLED)	\$1.24	.025	.050
	.018 (LOOSE)	\$1.01 + LABOR		+ LABOR
		2K EQUIPMENT		
	<u>VENDOR</u>	AUGAT, INC.	SMK, MOLEX, AMP, ETC.	

08/12/81 66B 039-437  
CS-6D-19

SCHEDULE CHART

40-70-AS-Just-In-Time-Systems-Program

WPS Office Manual

卷之三

4/30/81, CBW, 39-815

LEGEND:  SCHEDULED EVENT  COMPLETED EVENT  REVISED SCHEDULE

## SCHEDULE CHART



TEXAS INSTRUMENTS

18068A

**PROGRAM**  
**ALC PRODUCT A**

#### **PROGRAM MANAGER**

C. B. WILSON

DATA FROM THE

6-17-51

## LEGEND

## **SCHEDULED EVENTS**

**COMPLETED EVENT**

**REVISED SCHEDULE**

4/30/81, CBW, 39-815